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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,004	11/14/2001	Russell Watson	P67053US0	6625
136	7590	03/16/2005	EXAMINER	
JACOBSON HOLMAN PLLC 400 SEVENTH STREET N.W. SUITE 600 WASHINGTON, DC 20004			DESIRE, GREGORY M	
			ART UNIT	PAPER NUMBER
			2625	

DATE MAILED: 03/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p>09/926,004</p>	<p>Applicant(s)</p> <p>WATSON ET AL.</p>	
	<p>Examiner</p> <p>Gregory M. Desire</p>	<p>Art Unit</p> <p>2625</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 45-88 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 45-52, 59-60, 67-71, 78-83 and 85-88 is/are rejected.
- 7) ☒ Claim(s) 53-58, 61-66, 72-77 and 84 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/31/01</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 78, 81-84 and 85-88 are objected to because of the following informalities: Claim 78 depends on a cancelled claim (claim 44). Claims 81-83 and 85-88 depend on claim 81. Therefore also objected. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 48 recites the limitation "the secondary zone" in lines 4-5. Claim 84 an apparatus claim depends on claim 77 a method claim. Claims 78, 81-83 and 85-88 are apparatus claims all preceding claims for dependency are method claims. Apparatus claims 79 and 80 follow claim 78. Claim 78 cannot depend on claim 79 and 80. There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 45-52 and 79 are rejected under 35 U.S.C. 102(b) as being anticipated by Winston, jr. et al (5,410,149).

Regarding method claims 45 and 49 and apparatus claim 79 Winston, Jr. discloses,

Obtaining one or more images of the area (note fig. 1 block 20 and col. 2 line 63-col. 3 line 1 and col. 3 line 57-48, sensor transmit video image, thus must obtain video image to transmit). Using an edge detection technique in such a way as to highlight substantially dominant linear features in the image (s) (note col. 2 lines 50-56 and col. 3 lines 26-27, the lines cite the detection of floor lines and door lines, which are floor and door edges, when radiated (highlighted) form dominant linear features floor lines and door lines, and determining if any dominant linear feature intersect linear features defining the area (note fig. 4 and col. 3 lines 31-33). Additional line segment intersect line features defining planes p1 and p2, examiner interprets as dominant linear features intersect linear features defining the area.

Regarding method claim 46 Winston, Jr. discloses,

Wherein the area is an object detection zone (note col. 3 lines 17-19, obstruction detection is provided for doorway area), the area being separated into at least two zones (note col. 2 lines 50-60, floor area and doorway area) a primary zone, being the volume described by a door and a door sill (door way, door line area) and a secondary zone, which may include the volume beyond the door through which a person using the door would pass (floor area).

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Regarding claim 47 Winston Jr. discloses,

Primary zone is the door and sill of an elevator (col. 2 line 40) and secondary zone is the landing and/lobby where passengers may wait for the elevator (note fig. 1 plane p1 shows an area where passengers may stand and wait).

Regarding claim 48 Winston Jr. discloses,

Wherein there are at least two images (P1 and P2, plane are two image areas) and the method includes further step of detecting a parallax in the two or more image (note fig. 4, 60, examiner interprets as parallax which is a change in direction) produced by the presence of an object in the area, more specifically in the secondary zone (note col. 3 lines 46-56, line segment 60 change in direction of floor line was produce by an obstruction in the light plane, which may come from the lobby area),

Regarding claim 50 Winston Jr. discloses,

A preliminary stage of characterizing one or more images to establish the presence of any characteristic linear features in the area, said characteristic linear features are lines defining the door edges and/or sill and the location of said feature is stored for future reference.

Regarding claim 51 Winston Jr. discloses,

An operational stage, which analyzes one or more images to establish the presence of any uncharacteristic features in the volume, said uncharacteristic features

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representing potential object and/or obstruction in the area (note fig. 6 and col. 3 lines 59-61 and col. 4).

Regarding claim 52 Winston Jr. discloses,

Wherein the preliminary stage includes at least two steps, a first step of detecting the location and dimension of a doorsill and a second step of detecting the location and dimension of one or more door edges (note col. 2 lines 50-60).

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 67-71 and 80 are rejected under 35 U.S.C. 102(e) as being anticipated by Anandan et al (6,192,145)

Regarding method claim 67 Anandan et al discloses,

Detecting parallax in two or more images of an area (note fig. 5, block 504 and col. 10 lines 47-48, shows plurality of images of an area (frame) is used to detect parallax), the parallax produced by the presence of an object in the area (note fig. 5

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block 506 and col. 10 lines 48-50 points on a object image in the frame is used to produce parallax).

Regarding method claim 68 Anandan et al discloses,

Detecting temporal changes in the images of the area (note col. 8 lines 33-40, detects motion changes, motion is a product of time, thus detecting temporal changes).

Regarding method claim 69 Anandan et al. discloses,

Wherein the method includes the step of detecting vertical and horizontal parallax produced by an object located in the area (note col. 11 lines 35-45, parallax vectors are detected which provides directions).

Regarding method claim 70 Anandan et al. discloses,

Aligning backgrounds of a plurality of images of an area subtracting pairs of images so as to reveal by way of parallax, the presence of objects in the area (note col. 10 line 65- col. 11 line 2, alignment and subtraction is performed).

Regarding method claim 71 Anandan et al. discloses,

Aligning backgrounds of a first and second image of an area and subtracting the first image from the second, thereby revealing by way of parallax, the presence of a three dimension object (note col. 10 line 65-col. Line 2)

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 59-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winston, Jr. in view of Etoh (RE 37,668 E).

Regarding method claim 59

Winston Jr. discloses detects edges. However, Winston, Jr. is silent disclosing edge detection affected by means of filter. Etoh discloses edge detection affected by means of filter determining value of complex edges (note Etoh col. 21 lines 5-30).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to use edge filter in the system of Winston, Jr. as evidence by Etoh. Accurately calculating complex edges would have been a highly desirable feature in the image processing art due to its smoothing function and Etoh recognizes accurately calculating complex edges would be expected when edge filters of Etoh is included in the system of Winston, Jr.

Regarding method claim 60 Winston Jr. discloses,

Wherein the edge detection is aimed at highlighting dominant lines orientated substantially horizontal, vertical and substantially diagonal, more particularly the

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diagonal lines are substantially 45 degrees and 135 degrees in the image (note Etoh fig. 6 block 26, 27 and 28).

Allowable Subject Matter

10. Claim 53-58, 61-66 and 72-77 and 84 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 53 and 54, claims further limit the edge detection filter. This in combination with other features is not taught in the prior art. Claims 55-58 depend on claim 54. Therefore are also objected.

Regarding claim 61, the prior art fails to further limitation of the operation stage. This in combination with other features is not taught in the prior art. Claims 62-66 depend on claim 61. Therefore are also objected.

Regarding claim 72, the prior art fails to collecting, calculating aligning, subtracting and analyzing image in combination with the other limitation. Claims 73-77 and 84 depend on claim 72. Therefore are also objected.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory M. Desire whose telephone number is (703)

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308-9586. The examiner can normally be reached on M-F (8:30-6:00) Second Monday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Gregory M. Desire
Examiner
Art Unit 2625

G.D.
March 10, 2005


BHAVESH M. MEHTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600